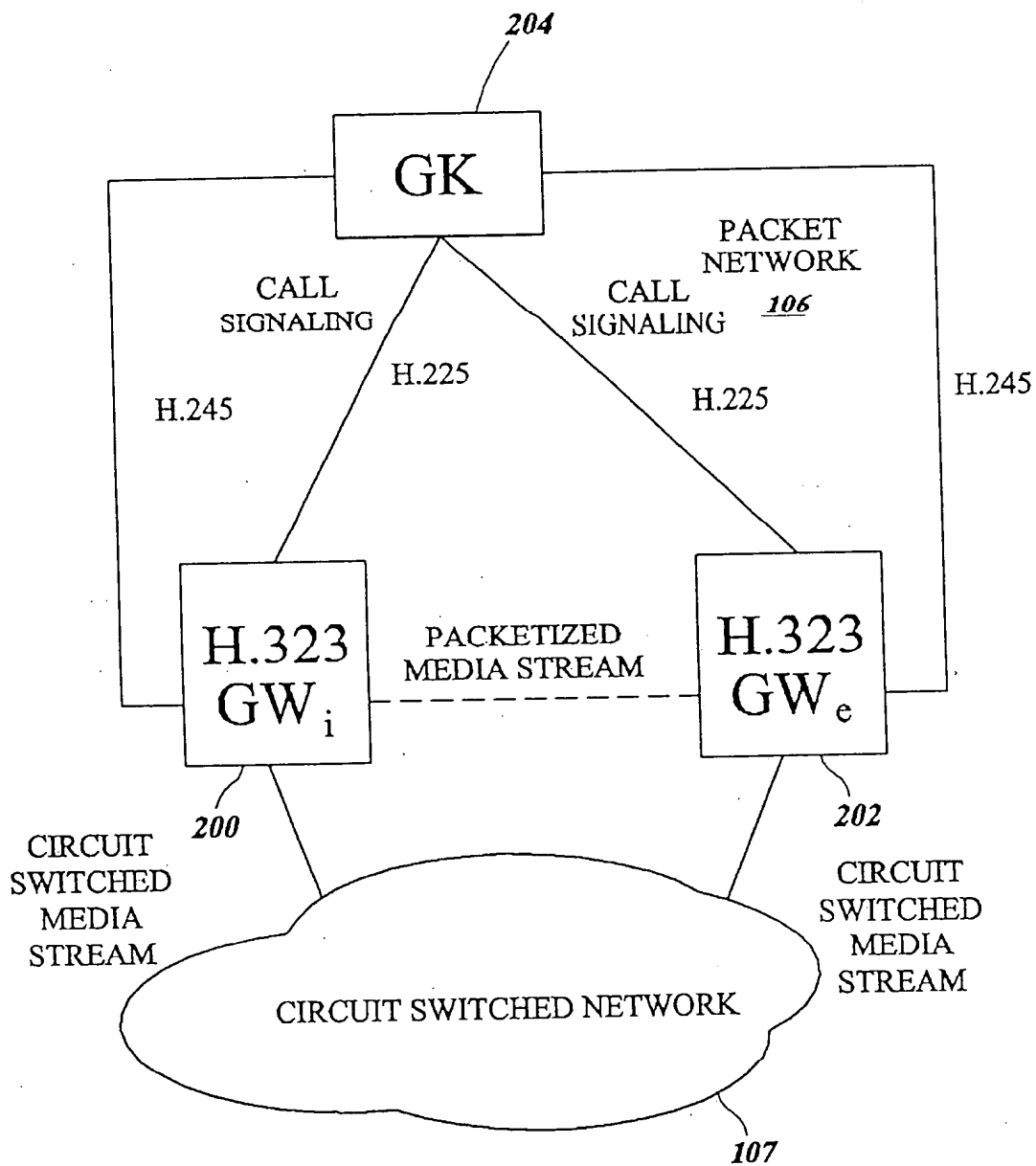


Figure 1 is a block diagram illustrating a media gateway architecture. At the top, a block labeled **MGCP** (100) is connected to a **PACKET NETWORK** (106). The **PACKET NETWORK** is connected to a **PACKETIZED MEDIA STREAM** (105). The **PACKETIZED MEDIA STREAM** is connected to a **MEDIA GATEWAY** (MG<sub>e</sub>) (105). The **MEDIA GATEWAY** (MG<sub>e</sub>) is connected to a **CIRCUIT SWITCHED NETWORK** (107). The **CIRCUIT SWITCHED NETWORK** is connected to a **MEDIA GATEWAY** (MG<sub>i</sub>) (104). The **MEDIA GATEWAY** (MG<sub>i</sub>) is connected to a **CIRCUIT SWITCHED MEDIA STREAM** (104). The **MEDIA GATEWAY** (MG<sub>e</sub>) is connected to a **CIRCUIT SWITCHED MEDIA STREAM** (105). The **MEDIA GATEWAY** (MG<sub>i</sub>) is connected to a **MEDIA GATEWAY** (MG<sub>e</sub>) via a dashed line. The **MEDIA GATEWAY** (MG<sub>i</sub>) is connected to a **MEDIA GATEWAY** (MG<sub>e</sub>) via a dashed line. The **MEDIA GATEWAY** (MG<sub>i</sub>) is connected to a **MEDIA GATEWAY** (MG<sub>e</sub>) via a dashed line.

**FIG. 1.**  
**(PRIOR ART)**



**FIG. 2**  
**(PRIOR ART)**

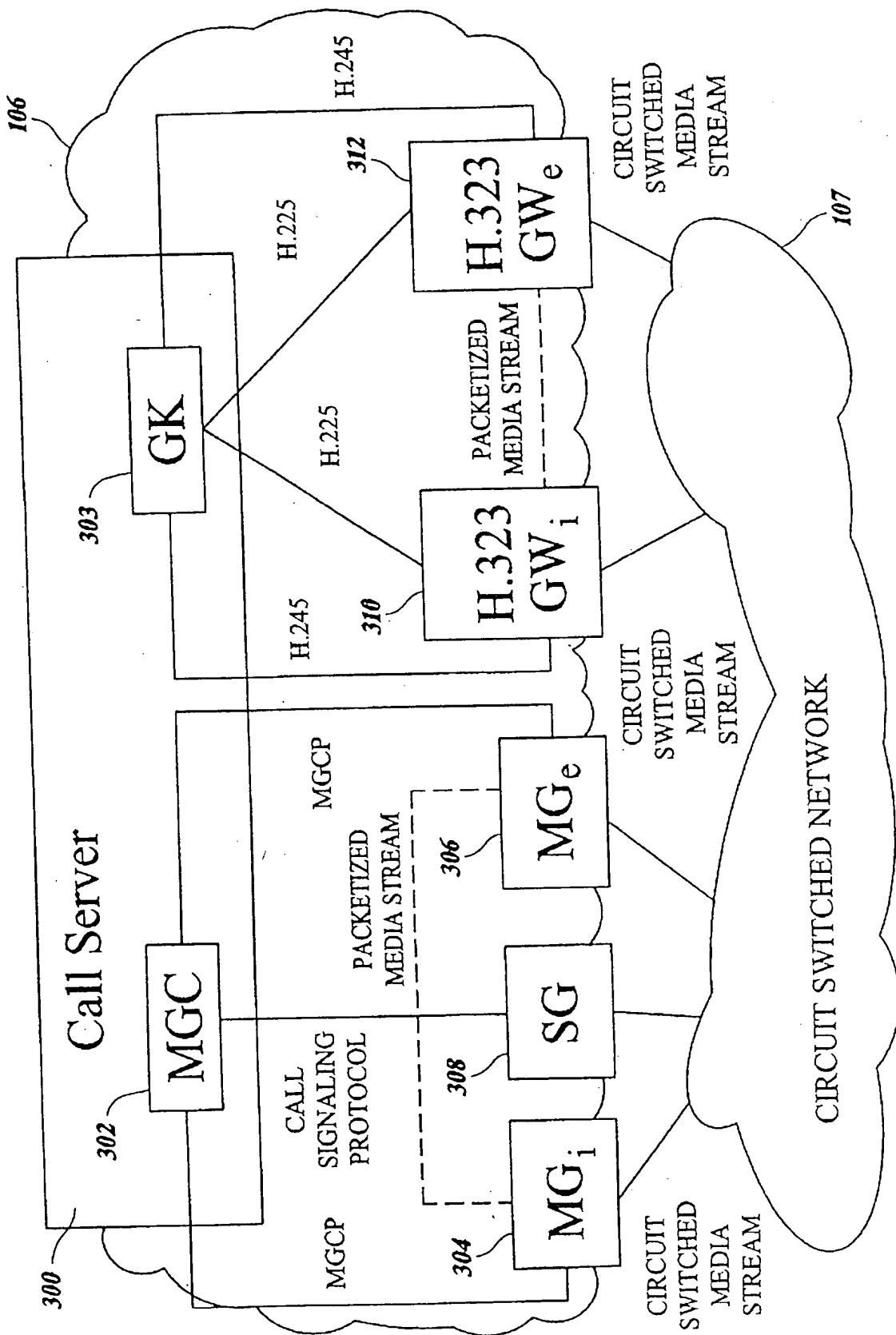


FIG. 3



000120 51690560

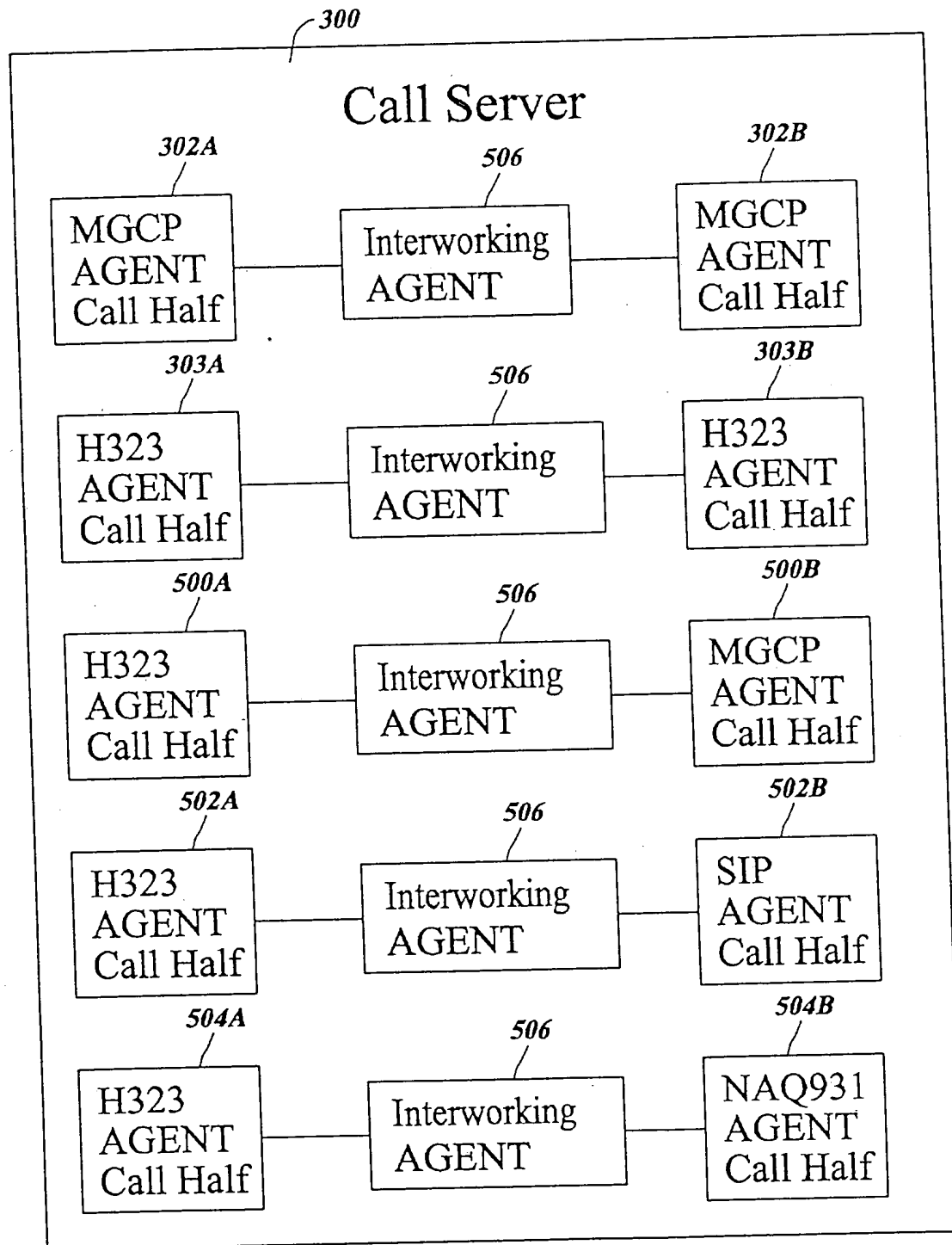


FIG. 5

Figure 1 is a block diagram illustrating a call server system architecture. The system consists of three main components: a central **Call Server** (300A) and two peripheral **Call Server** blocks (300B and 300C).

The central **Call Server** (300A) contains two rows of components:

- Top Row:** An **MGCP AGENT Call Half** (302A) is connected to an **IA** (506A), which is connected to another **IA** (506B), which is connected to an **MGCP AGENT Call Half** (302B).
- Bottom Row:** An **H323 AGENT Call Half** (303A) is connected to an **IA** (506A), which is connected to another **IA** (506B), which is connected to an **H323 AGENT Call Half** (303B).

The two peripheral **Call Server** blocks (300B and 300C) are connected to the central server's **IA** components via **AIP** lines:

- Call Server 300B:** Contains three **H323 AGENT Call Half** components (500A, 502A, 504A), each connected to an **IA** (506A). These **IA** components are connected to the central server's **IA** components (506A and 506B) via **AIP** lines.
- Call Server 300C:** Contains three components: **MGCP AGENT Call Half** (500B), **SIP AGENT Call Half** (502B), and **NAQ931 AGENT Call Half** (504B), each connected to an **IA** (506B). These **IA** components are connected to the central server's **IA** components (506A and 506B) via **AIP** lines.

FIG. 6

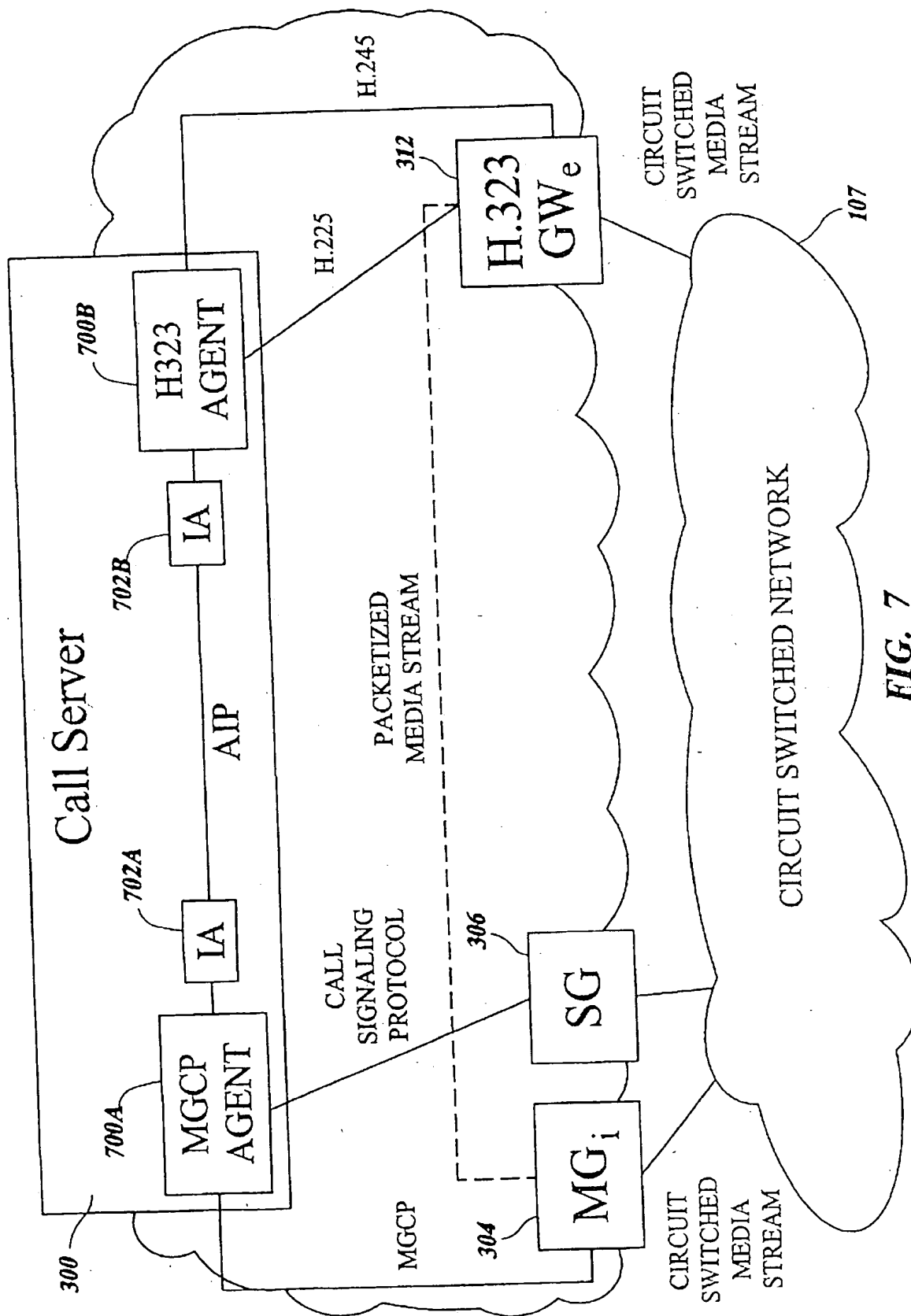


FIG. 7

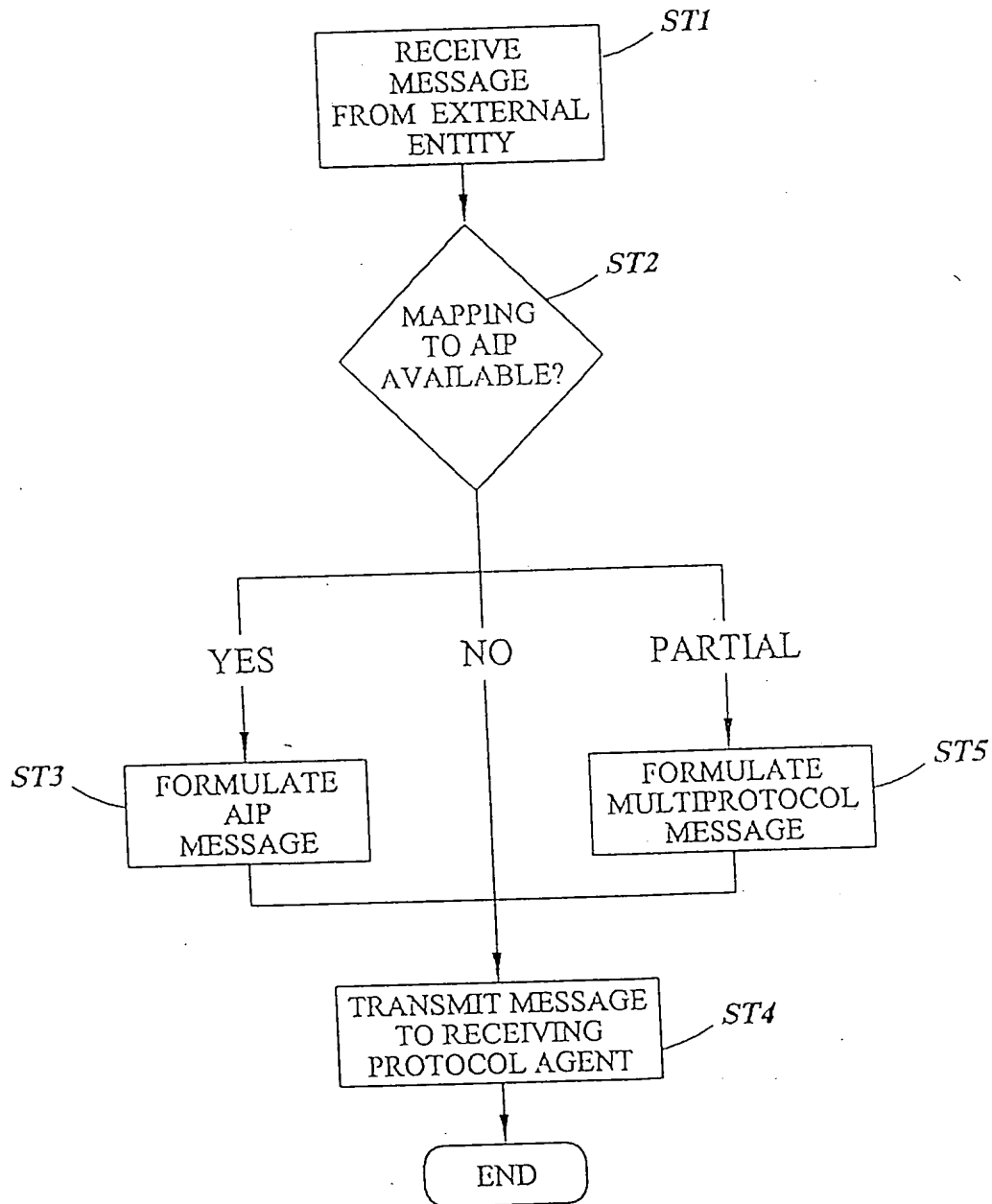
# Connection Information Parameter

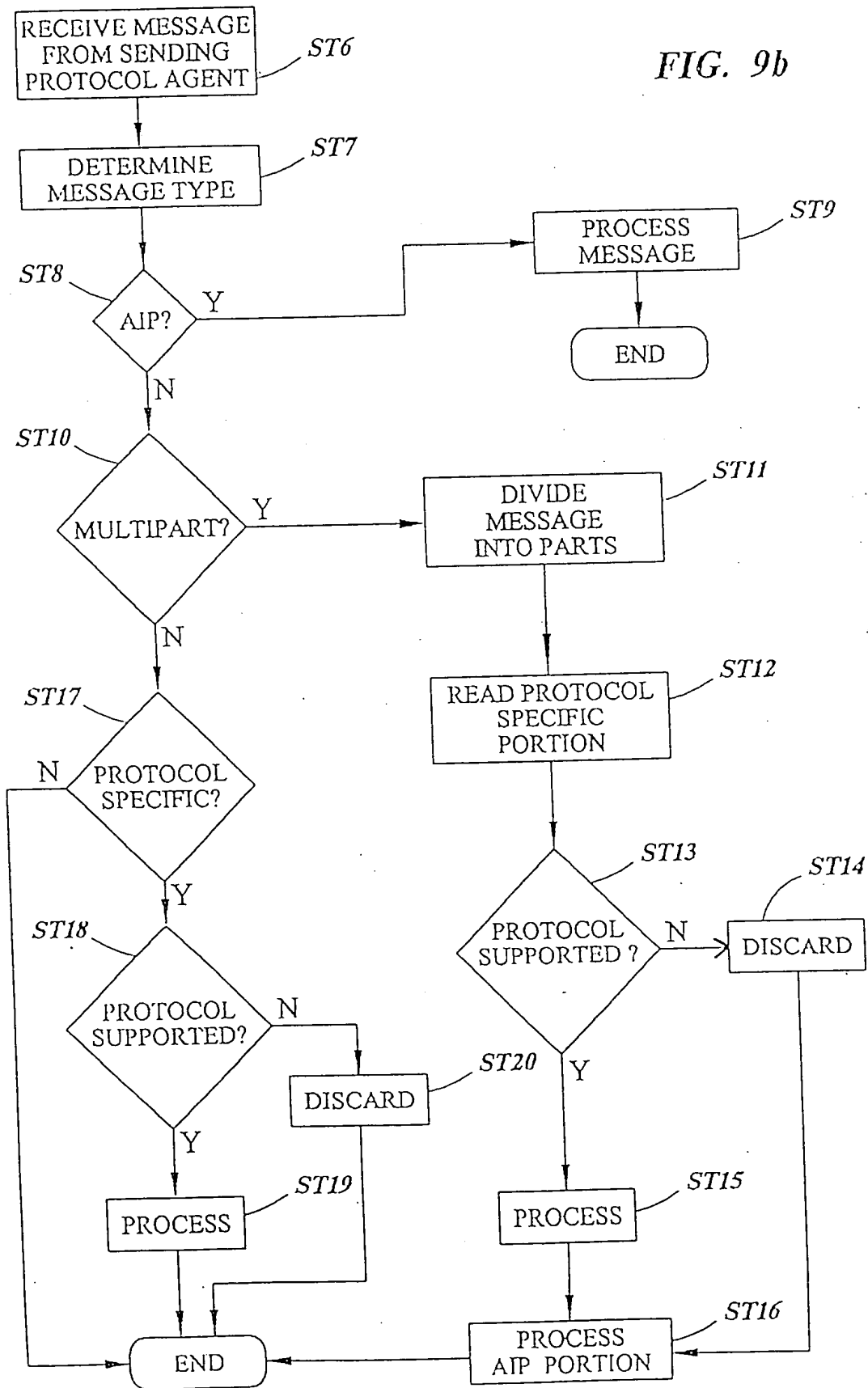
Field	Example Values
800 Media Type	802 Audio, Video, Data
804 Channel ID	806 12345
808 Channel Operation	810 No action, open, close, modify, mode change, redirect, direct, send capabilities
812 Current Media Description	814 G.711@2 frames/packet
816 Media Capabilities	818 G.711, G.729, RTP address, payload size, media specific information

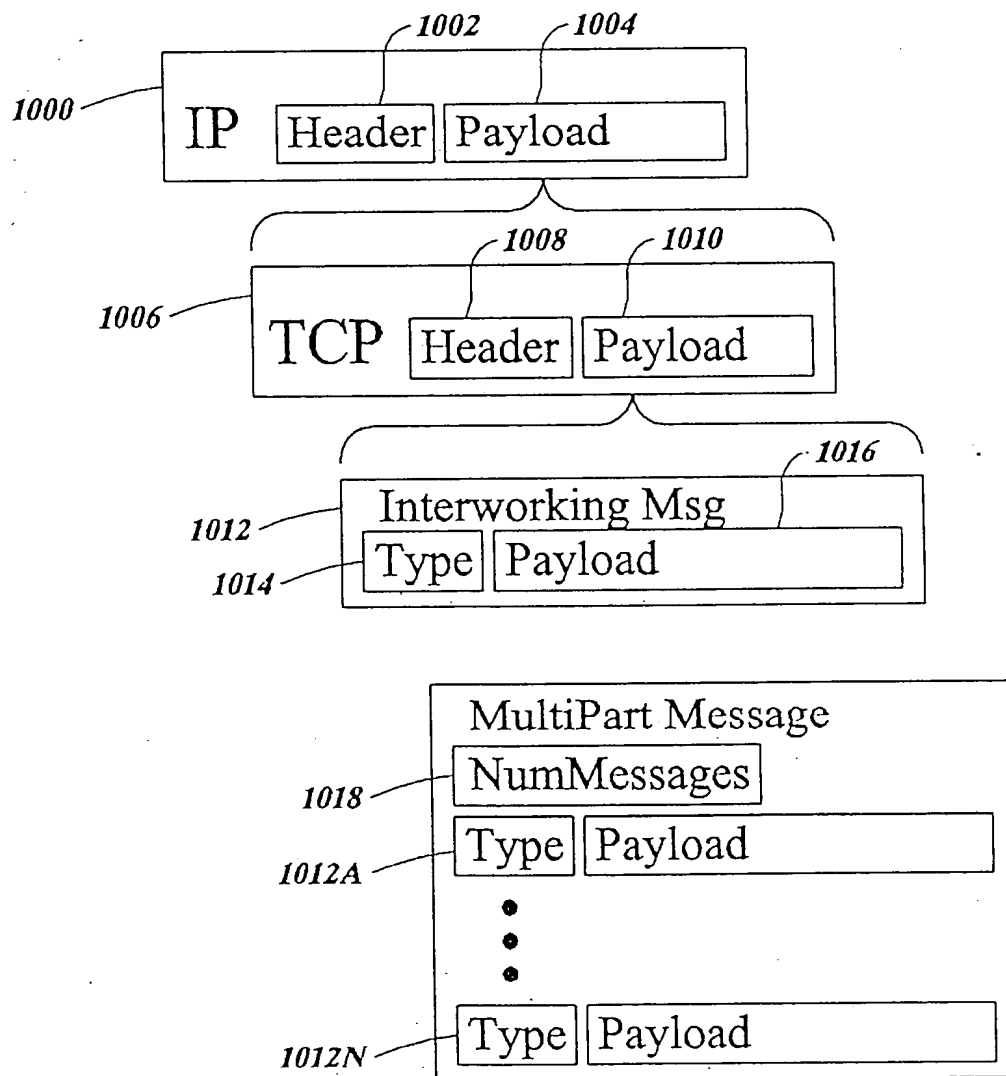
**FIG. 8**



FIG. 9a







**FIG. 10**

[illegible]

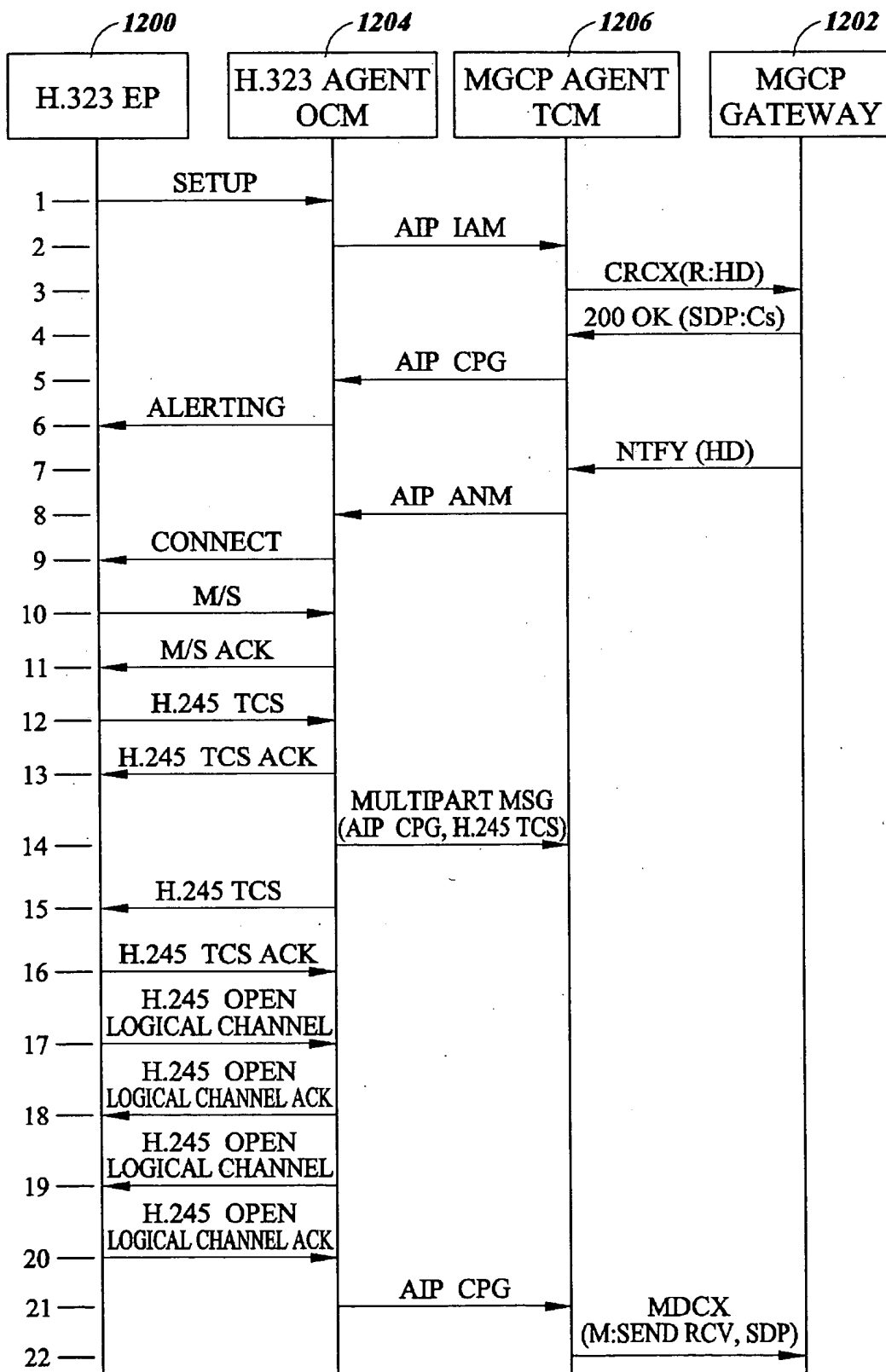
FIG. 11

```

sequenceDiagram
    participant 1200 as H.323 EP
    participant 1204 as H.323 AGENT OCM
    participant 1206 as MGCP AGENT TCM
    participant 1202 as MGCP GATEWAY

    Note over 1200: 1
    1200->>1204: SETUP (FASTSTART)
    Note over 1204: 2
    1204->>1206: AIP IAM (MEDIACAPABILITIES)
    Note over 1206: 3
    1206->>1202: CRCX (R:HD, L:MEDIACAPS)
    Note over 1202: 4
    1202->>1206: OK (SDP)
    Note over 1206: 5
    1206->>1204: AIP CPG (MEDIA DESCRIPTION)
    Note over 1204: 6
    1204->>1200: ALERTING (FASTSTART)
    Note over 1206: 7
    1206->>1202: NTFY (HD)
    Note over 1202: 8
    1202->>1206: 
    Note over 1206: 9
    1206->>1204: AIP ANM
    Note over 1204: 10
    1204->>1200: CONNECT (FASTSTART)
    Note over 1200: 11
    1200->>1204: M/S
    Note over 1204: 12
    1204->>1200: M/S ACK
    Note over 1200: 13
    1200->>1204: H.245 TCS
    Note over 1204: 14
    1204->>1206: MULTIPART MSG (AIP CPG, H.245 TCS)
    Note over 1206: 15
    1206->>1200: H.245 TCS
    Note over 1200: 16
    1200->>1204: H.245 TCS ACK
    Note over 1204: 17
    1204->>1206: 
    Note over 1206: 18
    1206->>1202: 
    Note over 1202: 19
    1202->>1206: 
    Note over 1206: 20
    1206->>1204: 
    Note over 1204: 21
    1204->>1200: 
    Note over 1200: 22
    1200->>1204: 
    Note over 1204: 23
    1204->>1206: 
    Note over 1206: 24
    1206->>1202: 
    Note over 1202: 25
    1202->>1206: 
    Note over 1206: 26
    1206->>1204: 
    Note over 1204: 27
    1204->>1200: 
    Note over 1200: 28
    1200->>1204: 
    Note over 1204: 29
    1204->>1206: 
    Note over 1206: 30
    1206->>1202: 
    Note over 1202: 31
    1202->>1206: 
    Note over 1206: 32
    1206->>1204: 
    Note over 1204: 33
    1204->>1200: 
    Note over 1200: 34
    1200->>1204: 
    Note over 1204: 35
    1204->>1206: 
    Note over 1206: 36
    1206->>1202: 
    Note over 1202: 37
    1202->>1206: 
    Note over 1206: 38
    1206->>1204: 
    Note over 1204: 39
    1204->>1200: 
    Note over 1200: 40
    1200->>1204: 
    Note over 1204: 41
    1204->>1206: 
    Note over 1206: 42
    1206->>1202: 
    Note over 1202: 43
    1202->>1206: 
    Note over 1206: 44
    1206->>1204: 
    Note over 1204: 45
    1204->>1200: 
    Note over 1200: 46
    1200->>1204: 
    Note over 1204: 47
    1204->>1206: 
    Note over 1206: 48
    1206->>1202: 
    Note over 1202: 49
    1202->>1206: 
    Note over 1206: 50
    1206->>1204: 
    Note over 1204: 51
    1204->>1200: 
    Note over 1200: 52
    1200->>1204: 
    Note over 1204: 53
    1204->>1206: 
    Note over 1206: 54
    1206->>1202: 
    Note over 1202: 55
    1202->>1206: 
    Note over 1206: 56
    1206->>1204: 
    Note over 1204: 57
    1204->>1200: 
    Note over 1200: 58
    1200->>1204: 
    Note over 1204: 59
    1204->>1206: 
    Note over 1206: 60
    1206->>1202: 
    Note over 1202: 61
    1202->>1206: 
    Note over 1206: 62
    1206->>1204: 
    Note over 1204: 63
    1204->>1200: 
    Note over 1200: 64
    1200->>1204: 
    Note over 1204: 65
    1204->>1206: 
    Note over 1206: 66
    1206->>1202: 
    Note over 1202: 67
    1202->>1206: 
    Note over 1206: 68
    1206->>1204: 
    Note over 1204: 69
    1204->>1200: 
    Note over 1200: 70
    1200->>1204: 
    Note over 1204: 71
    1204->>1206: 
    Note over 1206: 72
    1206->>1202: 
    Note over 1202: 73
    1202->>1206: 
    Note over 1206: 74
    1206->>1204: 
    Note over 1204: 75
    1204->>1200: 
    Note over 1200: 76
    1200->>1204: 
    Note over 1204: 77
    1204->>1206: 
    Note over 1206: 78
    1206->>1202: 
    Note over 1202: 79
    1202->>1206: 
    Note over 1206: 80
    1206->>1204: 
    Note over 1204: 81
    1204->>1200: 
    Note over 1200: 82
    1200->>1204: 
    Note over 1204: 83
    1204->>1206: 
    Note over 1206: 84
    1206->>1202: 
    Note over 1202: 85
    1202->>1206: 
    Note over 1206: 86
    1206->>1204: 
    Note over 1204: 87
    1204->>1200: 
    Note over 1200: 88
    1200->>1204: 
    Note over 1204: 89
    1204->>1206: 
    Note over 1206: 90
    1206->>1202: 
    Note over 1202: 91
    1202->>1206: 
    Note over 1206: 92
    1206->>1204: 
    Note over 1204: 93
    1204->>1200: 
    Note over 1200: 94
    1200->>1204: 
    Note over 1204: 95
    1204->>1206: 
    Note over 1206: 96
    1206->>1202: 
    Note over 1202: 97
    1202->>1206: 
    Note over 1206: 98
    1206->>1204: 
    Note over 1204: 99
    1204->>1200: 
    Note over 1200: 100
    1200->>1204: 
    Note over 1204: 101
    1204->>1206: 
    Note over 1206: 102
    1206->>1202: 
    Note over 1202: 103
    1202->>1206: 
    Note over 1206: 104
    1206->>1204: 
    Note over 1204: 105
    1204->>1200: 
    Note over 1200: 106
    1200->>1204: 
    Note over 1204: 107
    1204->>1206: 
    Note over 1206: 108
    1206->>1202: 
    Note over 1202: 109
    1202->>1206: 
    Note over 1206: 110
    1206->>1204: 
    Note over 1204: 111
    1204->>1200: 
    Note over 1200: 112
    1200->>1204: 
    Note over 1204: 113
    1204->>1206: 
    Note over 1206: 114
    1206->>1202: 
    Note over 1202: 115
    1202->>1206: 
    Note over 1206: 116
    1206->>1204: 
    Note over 1204: 117
    1204->>1200: 
    Note over 1200: 118
    1200->>1204: 
    Note over 1204: 119
    1204->>1206: 
    Note over 1206: 120
    1206->>1202: 
    Note over 1202: 121
    1202->>1206: 
    Note over 1206: 122
    1206->>1204: 
    Note over 1204: 123
    1204->>1200: 
    Note over 1200: 124
    1200->>1204: 
    Note over 120
```

FIG. 12



**FIG. 13**

The diagram illustrates the H.323 Close Logical Channel process across four entities: H.323 EP (1200), H.323 Agent BASIC CALL (1402), NA Q.931 AGENT BASIC CALL (1404), and NA Q.931 DEVICE (1400). The process is divided into nine time slots, numbered 1 through 9 on the left.

- Slot 1:** H.323 EP sends **TCS=0** to H.323 Agent.
- Slot 2:** H.323 Agent sends **AIP CPG** to NA Q.931 AGENT.
- Slot 3:** H.323 EP sends **H.245 CLOSE LOGICAL CHANNEL(LC1)** to H.323 Agent.
- Slot 4:** H.323 Agent sends **H.245 CLOSE LOGICAL CHANNEL(LC2)** to NA Q.931 AGENT.
- Slot 5:** NA Q.931 AGENT sends **FACILITY (M:INACTIVE)** to NA Q.931 DEVICE.
- Slot 6:** H.323 EP sends **H.245 CLOSE LOGICAL CHANNEL ACK** to H.323 Agent.
- Slot 7:** H.323 Agent sends **H.245 CLOSE LOGICAL CHANNEL(LC2)** to H.323 EP.
- Slot 8:** H.323 EP sends **H.245 CLOSE LOGICAL CHANNEL ACK** to H.323 Agent.
- Slot 9:** H.323 Agent sends **AIP CPG** to NA Q.931 AGENT.

Additional annotations include a **HOLD** period between slots 1 and 2, and a **FACILITY (M:INACTIVE)** period between slots 5 and 6.

FIG. 14

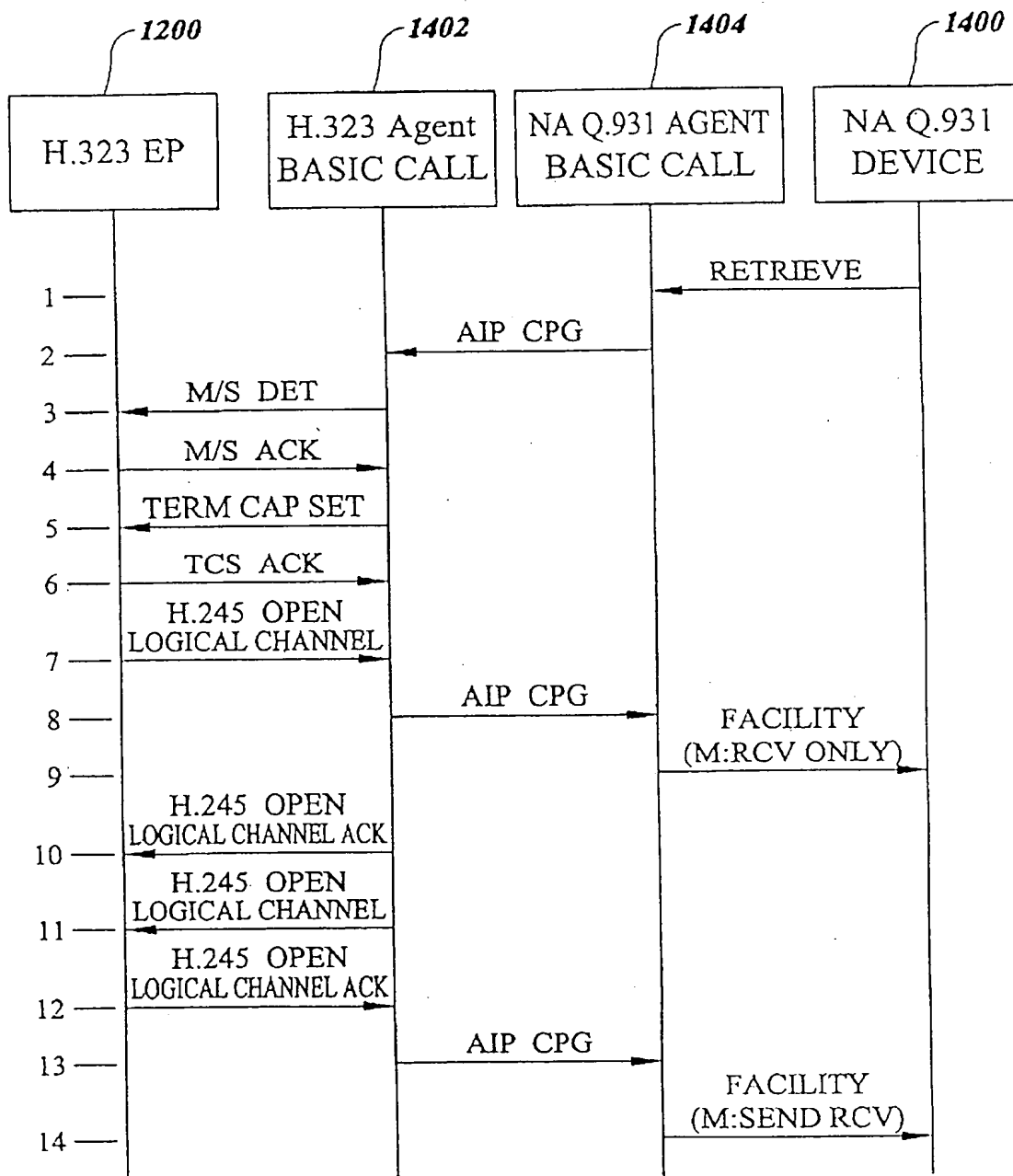


FIG. 15



```

sequenceDiagram
    participant 1200 as H.323 EP
    participant 1402 as H.323 Agent BASIC CALL
    participant 1602 as MGCP AGENT BASIC CALL
    participant 1600 as MGCP DEVICE

    Note over 1602: NOTIFY (HOLD)
    Note over 1402: AIP CPG
    Note over 1200: TCS=O
    Note over 1200: H.245 CLOSE LOGICAL CHANNEL
    Note over 1200: H.245 CLOSE LOGICAL CHANNEL ACK
    Note over 1602: MDCX (M:INACTIVE)
    Note over 1402: AIP CPG
    Note over 1200: H.245 CLOSE LOGICAL CHANNEL(LC2)
    Note over 1200: H.245 CLOSE LOGICAL CHANNEL ACK
  
```

Sequence diagram 1000 illustrates the H.245 Close Logical Channel procedure. The participants are H.323 EP (1200), H.323 Agent BASIC CALL (1402), MGCP AGENT BASIC CALL (1602), and MGCP DEVICE (1600). The diagram shows the following steps:

- MGCP AGENT BASIC CALL (1602) sends NOTIFY (HOLD) to MGCP DEVICE (1600).
- H.323 Agent BASIC CALL (1402) sends AIP CPG to MGCP AGENT BASIC CALL (1602).
- H.323 EP (1200) sends TCS=O to H.323 Agent BASIC CALL (1402).
- H.323 EP (1200) sends H.245 CLOSE LOGICAL CHANNEL to H.323 Agent BASIC CALL (1402).
- H.323 Agent BASIC CALL (1402) sends H.245 CLOSE LOGICAL CHANNEL ACK to H.323 EP (1200).
- MGCP AGENT BASIC CALL (1602) sends MDCX (M:INACTIVE) to MGCP DEVICE (1600).
- H.323 Agent BASIC CALL (1402) sends AIP CPG to MGCP AGENT BASIC CALL (1602).
- H.323 EP (1200) sends H.245 CLOSE LOGICAL CHANNEL(LC2) to H.323 Agent BASIC CALL (1402).
- H.323 Agent BASIC CALL (1402) sends H.245 CLOSE LOGICAL CHANNEL ACK to H.323 EP (1200).

FIG. 16

```

sequenceDiagram
    participant 1200 as H.323 EP
    participant 1402 as H.323 Agent BASIC CALL
    participant 1602 as MGCP AGENT BASIC CALL
    participant 1600 as MGCP DEVICE

    Note over 1602: NTFY RETRIEVE
    1602->>1600: NTFY RETRIEVE
    1602->>1402: AIP CPG
    1402->>1200: M/S
    1200->>1402: M/S ACK
    1402->>1200: TCS
    1200->>1402: TCS ACK
    1402->>1200: H.245 Open LOGICAL CHANNEL
    1402->>1602: AIP CPG
    1602->>1600: MDCX (M:RCV ONLY)
    1600->>1200: H.245 OPEN LOGICAL CHANNEL ACK
    1200->>1402: H.245 OPEN LOGICAL CHANNEL
    1402->>1200: H.245 OPEN LOGICAL CHANNEL ACK
    1402->>1602: AIP CPG
    1602->>1600: MDCX (M:SEND RCV)
  
```

The diagram illustrates the H.323 Agent Basic Call process across four entities: H.323 EP (1200), H.323 Agent BASIC CALL (1402), MGCP AGENT BASIC CALL (1602), and MGCP DEVICE (1600). The process is divided into 14 time slots. In slot 1, the MGCP AGENT BASIC CALL (1602) sends an NTFY RETRIEVE message to the MGCP DEVICE (1600). In slot 2, the MGCP AGENT BASIC CALL (1602) sends an AIP CPG message to the H.323 Agent BASIC CALL (1402). In slot 3, the H.323 Agent BASIC CALL (1402) sends an M/S message to the H.323 EP (1200). In slot 4, the H.323 EP (1200) sends an M/S ACK message to the H.323 Agent BASIC CALL (1402). In slot 5, the H.323 Agent BASIC CALL (1402) sends a TCS message to the H.323 EP (1200). In slot 6, the H.323 EP (1200) sends a TCS ACK message to the H.323 Agent BASIC CALL (1402). In slot 7, the H.323 Agent BASIC CALL (1402) sends an H.245 Open LOGICAL CHANNEL message to the H.323 EP (1200). In slot 8, the H.323 Agent BASIC CALL (1402) sends an AIP CPG message to the MGCP AGENT BASIC CALL (1602). In slot 9, the MGCP AGENT BASIC CALL (1602) sends an MDCX (M:RCV ONLY) message to the MGCP DEVICE (1600). In slot 10, the MGCP DEVICE (1600) sends an H.245 OPEN LOGICAL CHANNEL ACK message to the H.323 EP (1200). In slot 11, the H.323 EP (1200) sends an H.245 OPEN LOGICAL CHANNEL message to the H.323 Agent BASIC CALL (1402). In slot 12, the H.323 Agent BASIC CALL (1402) sends an H.245 OPEN LOGICAL CHANNEL ACK message to the H.323 EP (1200). In slot 13, the H.323 Agent BASIC CALL (1402) sends an AIP CPG message to the MGCP AGENT BASIC CALL (1602). In slot 14, the MGCP AGENT BASIC CALL (1602) sends an MDCX (M:SEND RCV) message to the MGCP DEVICE (1600).

FIG. 17-

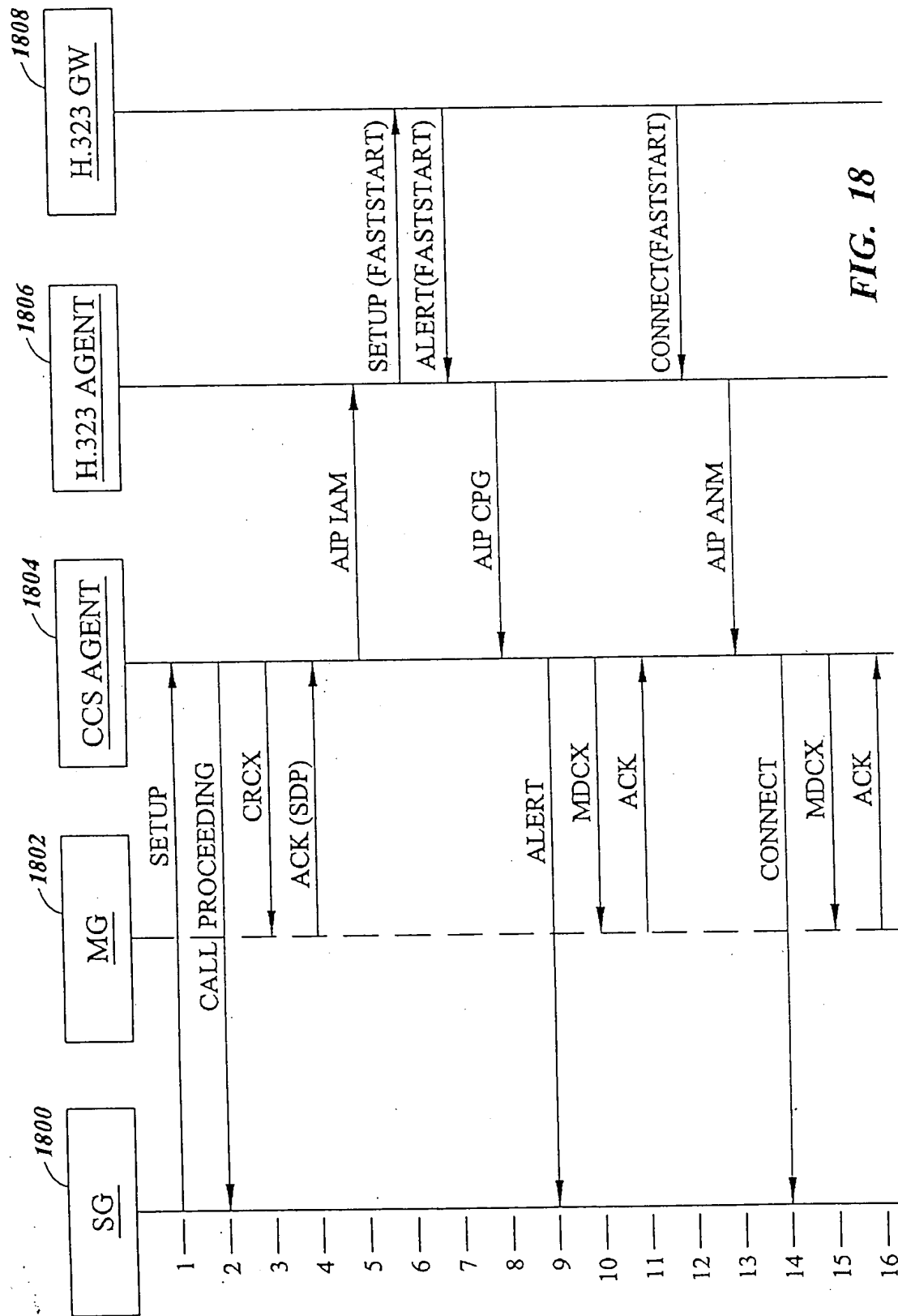


FIG. 18

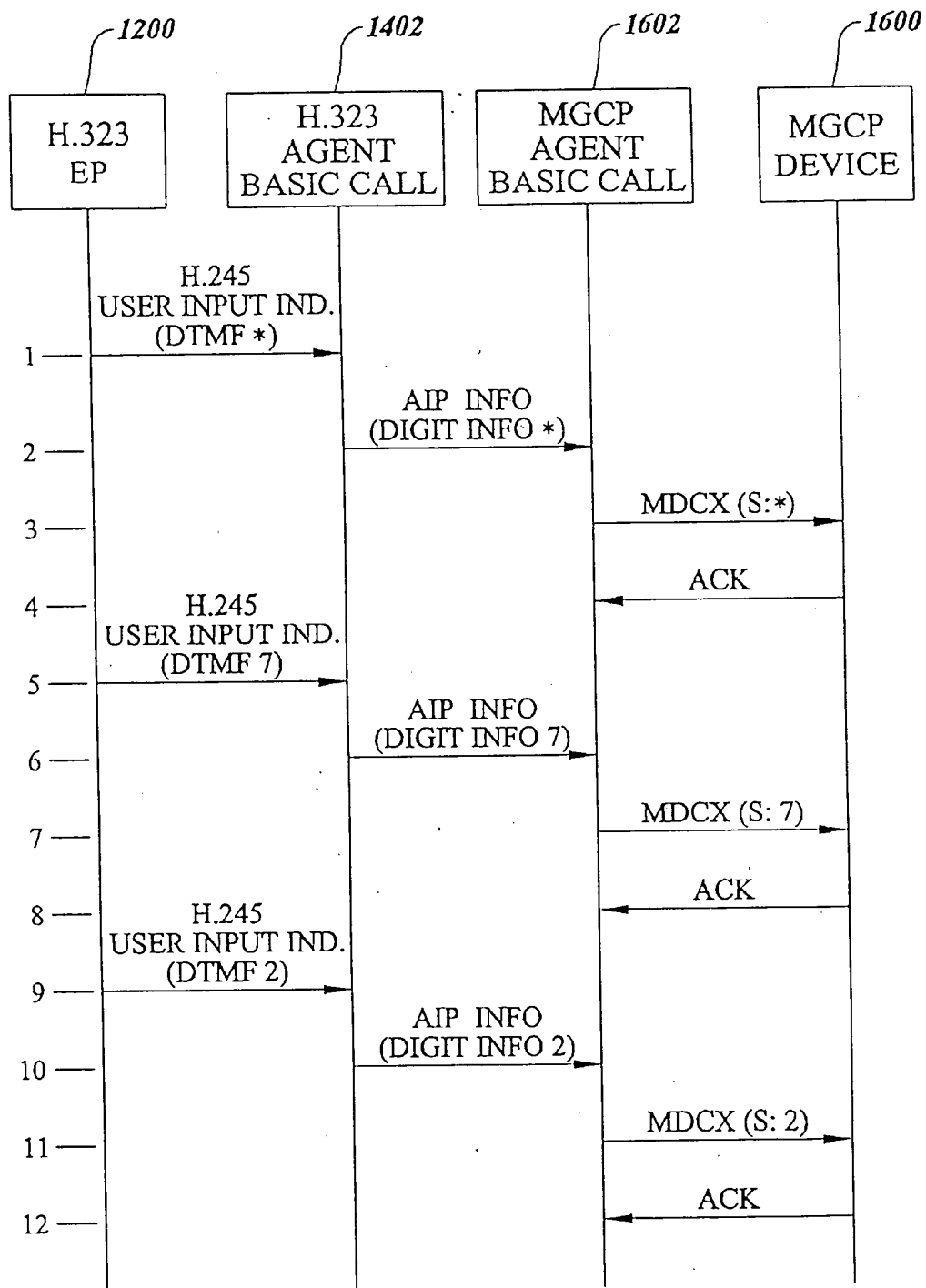


FIG. 19